

Title (en)
THREE-PHASE PERMANENT MAGNET SYNCHRONOUS MOTOR

Title (de)
DREIPHASIGER PERMANENTMAGNETSYNCHRONMOTOR

Title (fr)
MOTEUR SYNCHROME À AIMANT PERMANENT TRIPHASÉ

Publication
EP 2819282 A4 20160413 (EN)

Application
EP 12869166 A 20120730

Priority
• JP 2012038656 A 20120224
• JP 2012069325 W 20120730

Abstract (en)
[origin: EP2819282A1] A cogging torque can be significantly reduced in a three-phase permanent magnet-type synchronous motor. In a three-phase permanent magnet-type synchronous motor where a fraction of $2N/3P$ is not an integer assuming that the number of magnetic poles of a rotator 3 is P and the number of slots of a stator 2 is N , the stator 2 includes a tooth 5 facing a surface of a magnetic pole of the rotator 3 via a void and a tooth width of the tooth 5 in the circumferential direction is approximately $1/2$ of a slot pitch of the stator 2. In a three-phase permanent magnet-type synchronous motor of an outer rotor type, the tooth 5 of the stator 2 has a radial cross section with an approximately uniform shape from a tooth tip portion to a tooth root portion or a radial cross section with a larger tooth root portion than a tooth tip portion so as to allow mounting a winding unit from the tooth tip portion. The winding unit is preliminarily wound by a coil.

IPC 8 full level
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H02K 1/165 (2013.01 - EP US); **H02K 1/2791** (2022.01 - EP US); **H02K 21/00** (2013.01 - US); **H02K 21/22** (2013.01 - EP US); **H02K 7/006** (2013.01 - EP US); **H02K 2201/03** (2013.01 - EP US); **H02K 2203/12** (2013.01 - EP US); **H02K 2213/03** (2013.01 - EP US)

Citation (search report)
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Designated contracting state (EPC)
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